



**THE IMPORTANCE OF ARMY WATERCRAFT TO THE OPERATIONAL  
COMMANDER AS A COMBAT MULTIPLIER**

JOINT MARITIME OPERATIONS  
RESEARCH PAPER

By

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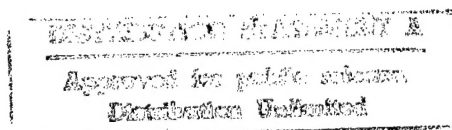
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This paper submitted to the faculty of the Naval War College in satisfaction of the requirements of the Department of Strategy and Policy.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

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<b>15. Abstract:</b> One of the many problems facing the Joint Task Force (JTF) Commander is, how to get the right mix of combat power to the decisive engagement to defeat his opponent. Thus allowing the commander the ability to set the terms of battle. Joint Pub 4.01 briefly describes service responsibilities, but fails to clearly lay the course on how to integrate the many varied pieces of the joint puzzle. This responsibility clearly falls on the shoulders of the JTF Commander. The flexibility in the forces readily available to the JTF Commander aren't always evident. A good staff will recommend courses that clearly economizes the best the commander has to bring to the enemy for that decisive encounter and on his terms. The land commander must use "the total means at his disposal". <sup>1</sup> Utilizing the principles of mass, economy of force and surprise are almost always included in this. Logistics are often thought of as that necessary evil or that unglamorous undertaken done by the "loggies". Transportation, the "Spearhead of Logistics" is often and correctly considered a major limiting factor on the battlefield. This can range from congested Main Supply Routes (MSRs) or simply insufficient transportation lift available to the commander to move supplies, equipment or personnel forward to the battle line. The goal of this paper is to clearly show the reader that Army transportation watercraft assets can be a combat multiplier readily available to project power in the littorals around the world in such a manner as to ensure "Land Force Dominance".			
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<sup>1</sup> Clausewitz, Carl Von, *On War* (p77)

## ABSTRACT

One of the many problems facing the Joint Task Force (JTF) Commander is, how to get the right mix of combat power to the decisive engagement to defeat his opponent. Thus allowing the commander the ability to set the terms of battle. Joint Pub 4.01 briefly describes service responsibilities, but fails to clearly lay the course on how to integrate the many varied pieces of the joint puzzle. This responsibility clearly falls on the shoulders of the JTF Commander. The flexibility in the forces readily available to the JTF Commander aren't always evident. A good staff will recommend courses that clearly economizes the best the commander has to bring to the enemy for that decisive encounter and on his terms. The land commander must use "the total means at his disposal".<sup>1</sup> Utilizing the principles of mass, economy of force and surprise are almost always included in this. Logistics are often thought of as that necessary evil or that unglamorous undertaken done by the "loggies". Transportation, the "Spearhead of Logistics" is often and correctly considered a major limiting factor on the battlefield. This can range from congested Main Supply Routes (MSRs) or simply insufficient transportation lift available to the commander to move supplies, equipment or personnel forward to the battle line.

The goal of this paper is to clearly show the reader that Army transportation watercraft assets can be a combat multiplier readily available to project power in the littorals around the world in such a manner as to ensure "Land Force Dominance".

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<sup>1</sup> Clausewitz, Carl Von, *On War* (p77)

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## INTRODUCTION

The Army Transportation Corps has had a long and proud history serving the United States and its Army. Major battles on land are correctly associated with a nation's Army. Sir Julian Corbett in 1900 said "we speak glibly of 'sea power' and forget that its true value lies in its influence on the operations of armies..."<sup>2</sup> The Normandy invasion in June, 1944 was a major U.S. Joint and Allied success, putting 176,000 allied combat troops with their equipment over the beach in a foreign land within 72 hours<sup>3</sup>. What has happened to the U.S. Army's ability to project power from the sea? Is that flexibility still in the force structure or has the Army relinquished this control to the U.S. Naval forces, particularly the Marines with their LCACs? I propose that both capabilities are very much a vibrant part of each service. That the need for a "kicking in of the door" over the shore by the Marines and the requisite Logistics Over-the-Shore (LOTS) by the Army are essential elements in any U.S. Joint Operation.

In 1997 the U.S. military continues to right size itself. We've done this by getting smaller while retaining our lethality. This could only be done by focusing on "Jointness" among the services thus capitalizing on and economizing our forces. For each service brings important, relevant and separate components to the fight. The Joint Task Force commander is responsible for integrating these forces to capitalize on their strengths while mitigating their weaknesses. Since the Goldwater-Nichols Act of 1986, the military services have worked hard to jointly integrate the capabilities of each service for the CINC, but the need to continue to refine our working relationships is still very relevant.

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<sup>2</sup> Joint Pub 4-01.5, *Joint Tactics, Techniques, and Procedures for Water Terminal Operations* (pIII-1)

<sup>3</sup> Steeg, Clarence I. Ver & Hofstadter, Richard, *A People and a Nation* (p706)

## DOCTRINAL EMPLOYMENT

The Army's Transportation Terminal Units are some of the first units to arrive in any contested theater. They are versatile and designed to move large quantities of cargo from Military Sealift Command (MSC) owned/chartered ships and Navy ships over shore in fixed, denied, damaged or non-existent seaports. When port facilities are available these assets stand ready to reposition forces as required by the Operational or Joint Task Force (JTF) Commander. These forces "will operate under a multi-dimensional security umbrella provided by either a Naval Expeditionary Force (NEF) or by Marine, Joint or Host Nation forces already ashore".<sup>4</sup> Additionally, Army watercraft units have the mission of providing alternate MSRs along the coast and through putting equipment, supplies and personnel via inland waterways.

Many commanders in the Army are well versed in watercraft operations. The 25<sup>th</sup> Infantry Division in Hawaii frequently uses watercraft to deploy divisional elements to various training areas throughout the Hawaiian Islands. The 10<sup>th</sup> Mountain Division as recently as 1993 used watercraft extensively in Somalia as part of "Operation Restore Hope". It is easy to see with each reduction in forward based forces that rapidly deployable forces become increasingly relevant in the evolving operational environment. Limiting the CINC's operational mobility and thus his flexibility constrains his chance of projecting overwhelming OPTEMPO on the enemy or his ability to respond to "Crisis Response Missions". Further protection of the already small, but capable watercraft infrastructure in the Army is essential in providing the commander with and operational surprise capability. Watercraft are not "sexy" combat systems and as such System

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<sup>4</sup> USMC Memo, *Maritime Prepositioning Force (MPF) Operational Concept* Feb 1995. (p2)

Integrators (SIs) at the Department of the Army continue to defend their viability as a combat multiplier to the ground commander on the battlefield.

The Army has long been looked at numerically having a Navy as large as the United States Navy. In reality the Army has downsized its watercraft fleet to 283 various Tugs, causeways, cranes, barges and lighterage. (See Appendix II) Currently 140 of these craft are lighterage, commonly referred to as landing craft. Most of these are small Landing Craft Utility-8s or LCM-8s (See Appendix II). The truth of the matter is that the Army possesses the flexibility with forces allocated between two CINCs to move substantial combat forces throughout the littoral operating areas of the world. Too often this capability is overlooked, misunderstood or misused. Army doctrine as described in the Army Watercraft Master Plan (AWMP) calls for prepositioning 10 lighterage craft forward in the Western Hemisphere and 10 craft in the Eastern Hemisphere. Additionally there would be 25 watercraft stationed afloat on two Heavy Lift Prepositioned Ships (HLPS). "This plan only includes watercraft necessary to support a single contingency, but it does provide the ability to cover either of two geographical areas."<sup>5</sup> The current watercraft inventory isn't enough to fully execute this. We currently have 70% of this requirement in the inventory. Limited procurement of LSVs and LCU-2000s is required before the necessary prepositioned watercraft capability can be deployed to fully support a second simultaneous conflict. The current inventory is enough to support only one Major Regional Conflict (MRC), with a significant, but not fully capable force available to simultaneously support a second CINC involved with a Military Operation Other Than War (MOOTW) or another MRC. The Army has these watercraft programmed into their

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<sup>5</sup> Department of the Army, *Army Watercraft Master Plan*, Nov 96 (p4-5).

current Program Objective Memorandum (POM). When the programmed construction is completed each CINC or JTF commander using these assets will have the ability to move or reposition along the coast 95 M1A2 Main Battle Tanks (MBTs) over the beach in a single lift. To put this in perspective the current Army force structure for an armor battalion is 58 M1A2 MBTs. This will give the CINC or JTF commander the lift potential of a full battalion plus three companies of armor.

It is generally recognized in DoD that right sizing the military reduced the number of combat units stationed forward that can contend with multiple threats. The Military Strategy for the United States has changed from the traditional focus of containing Soviet expansionism with emphasis on Central Europe, to a focus on regional contingency planning in support of joint operations and its subsequent sustainment. "Because the United States will have fewer forces forward stationed, the cornerstone of this new strategy is power projection."<sup>6</sup> To meet this requirement the Army developed the Army Strategic Mobility Program (ASMP). "The ASMP is the Army's program to implement the recommendations of the DoD Mobility Requirements Study (MRS) and provide the necessary capability to meet the deployment goals of a CONUS-based power projection Army. The ASMP calls for five divisions plus a Corps Support Command to deploy by air and/or sea and close by C+75."<sup>7</sup> The condition of available ports when U.S. forces enter a theater cannot be predicted. "Given this uncertainty, watercraft units must possess the necessary capability and capacity to perform a variety of operations in any environmental condition."<sup>8</sup>

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<sup>6</sup> Ibid (p2-4)

<sup>7</sup> Ibid (p2-5)

<sup>8</sup> Ibid (p2-7)



## ARMY WATERCRAFT CAPABILITIES

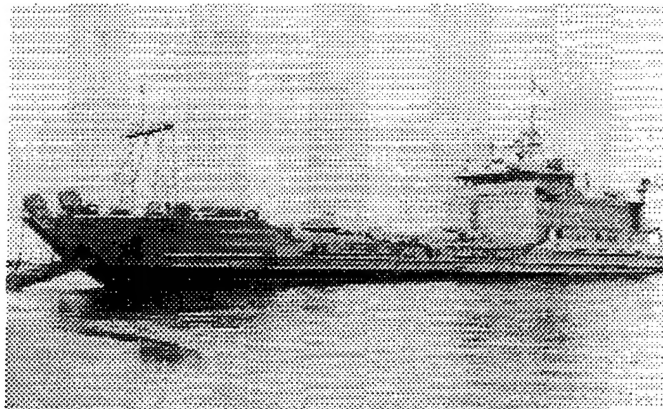


FIGURE 1 (AN ARMY LCU-2000 DISCHARGING TO THE BEACH)

Joint Pub 4-01.6 states it is the Army's responsibility to "provide lighterage, tugs, small craft, other discharge equipment and trained operators for JLOTS operations and provide the common service assets required to supplement amphibious operations". Additionally, Title 10 of United States Code, Paragraph 3062 states the Army will "Prepare for land combat, including the necessary aviation and watercraft support". As a result the Army continues to possess numerous types of watercraft (See Appendix II). Each year the number of vessels in the Army diminishes, but the capability to project power in a given theater increases. Currently the largest of the Army's lighterages is the Logistical Support Vessel (LSV). The Army has 6 LSVs, with an additional 3 programmed for procurement through the year 2012. Each vessel is capable of transporting 25 M1A2 Main Battle Tanks (MBTs) through the littoral and up a given coast of a potential adversary in a single lift. It can independently self-deploy anywhere in the world. It has a fully loaded range of 6,500 Nautical Miles (NM) at 11.5 knots or a empty range of 8,200 NM at 12.5 knots. Drawing only a 6' draft empty or a 12' fully loaded makes the LSV an invaluable and versatile resource. The second largest lighterage

in the inventory is the Landing Craft Utility (LCU) 2000. This craft can also self-deploy anywhere in the world. It has a fully loaded range of 6,500 NM at 10 knots or a empty range of 10,000 NM at 12 knots. Fully loaded with 5ea M1A2 MBTs or 24ea 20' double stacked ISO containers it only draws a 9' draft. There are currently 34 craft on-hand with an additional 13 to be procured through the year 2012. The Army has laid out a plan in its Army Watercraft Master Plan to divest itself of obsolete craft while it procures what it needs to meet the needs of the DoD Mobility Requirements Study (MRS), the Army Strategic Mobility Program (ASMP) and its TOE Training Requirements. The current inventory as of 1 Oct 1996 was 140 craft of various lighterage types. There are 51 craft which are obsolete or no longer required. This leaves 89 craft for a 127 craft requirement, or a 38 craft shortfall. The Army has recognized the need to modernize and in some cases expand the fleet to meet its ASMP requirements. The Army currently has programmed \$858.9M through the year 2012 to address and fix these shortfalls.

## OPERATIONAL IMPACT TO ENSURE LAND FORCE DOMINANCE

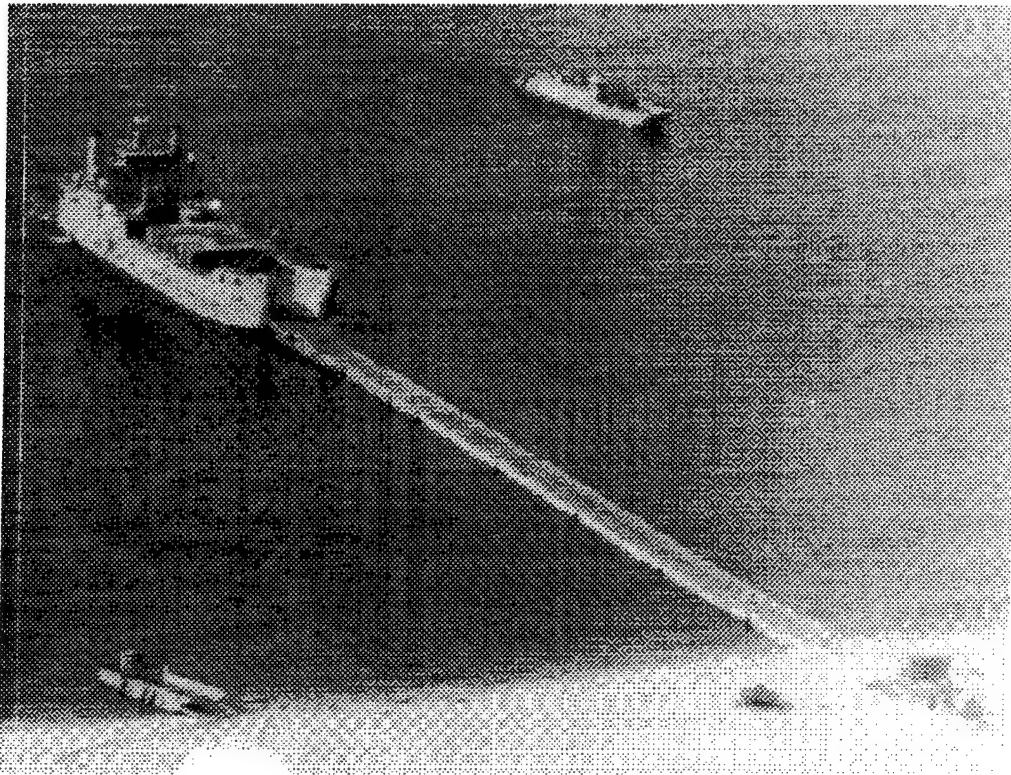


FIGURE 2 (CIN ARMY LSV DISCHARGING OVER CAUSEWAYS TO  
THE BEACH)

The ability of ground, naval and air forces to initiate and sustain combat operations is frequently based upon what logistical support is available for that operation. "The movement of forces into a theater is based upon how the JTF Commander intends to employ them, therefore the JTF is organized for this capability at the APOE and SPOE in order for its combat capability to be immediately available for use upon debarkation."<sup>9</sup> The CINC or JTF Commander requires maximum flexibility when maneuvering his forces. Operations Desert Shield/Storm demonstrated the operational flexibility Army watercraft gave the CINC. "Although U.S. and allied forces had the luxury of two modern, deep-draft ports, Army watercraft had to be used extensively for port operations, LOTS

operations, and intra-theater transport to support the CINC's scheme of maneuver"<sup>10</sup>. For example "Army LSVs self deployed and performed intra-theater missions carrying tanks and ammunition. LCUs conducted over 300 missions shuttling Marine Corps equipment between the port of Jubayl and a LOTS site at Ras Al Mishab<sup>11</sup>. To complicate things Iraqi forces destroyed shore facilities and sunk vessels throughout the port of Ash Shuaybah effectively rendering the port inaccessible to Strategic Sea Lift or deep draft vessels. As a result some of the first humanitarian supplies and equipment support to arrive in Kuwait after the cease fire were delivered by the Army's LSVs and LCUs from Saudi Arabia. In the Korean War (1950-53) General MacArthur used watercraft from both the Army and Marines to conduct a successful amphibious assault at Inchon, Korea as part of an operational surprise. "General MacArthur, reinforced with adequate American troops, launched a bold and highly successful amphibious assault far beyond North Korean lines at Inchon near Seoul. The strategy worked so well that within two weeks the North Korean armies were again retreating north of the 38<sup>th</sup> parallel."<sup>12</sup> The relevance of watercraft to the operational commander isn't always apparent, but when one looks at how it enhances critical reconstitution/regeneration efforts, inserts combat forces almost anywhere along a country's coastline or resupplies forces from anchored ships when there isn't a port infrastructure available, watercraft become a commander's "Combat Multiplier".

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<sup>9</sup> Pina, Luis A., *JLOTS a doctrinal perspective*, NWC paper, 1991

<sup>10</sup> Department of the Army, *Army Watercraft Master Plan*, Nov 96 (p2-3).

<sup>11</sup> Ibid (p2-3)

<sup>12</sup> Steeg, Clarence I. Ver & Hofstadter, Richard, *A People and a Nation* (p749)

## THE FUTURE

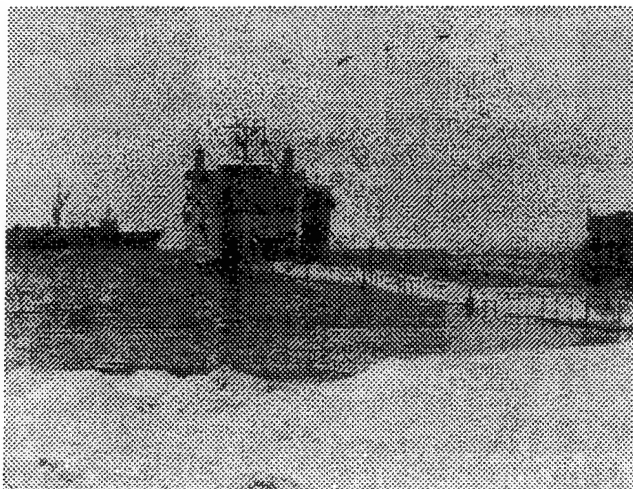


FIGURE 3 (ARMY LSV DISCHARGING TO THE BEACH OVER CAUSEWAYS)

The Army is very concerned and committed to “Jointness” in future operations. In many cases the Army and Marine Corps have similar systems doing different jobs. In August 1996 the Army and Navy signed a Memorandum of Agreement to work jointly on future procurements for watercraft, specifically designed to operate in the littoral area moving forces and equipment. This is the first step in quantifying the missions and roles each service brings to the fight. It is the major step forward in defining a specific protocol for coordination between the two services concerning LOTS/JLOTS, research, development and acquisition of interoperable systems.<sup>13</sup> Additionally, it also addresses other joint program areas of interest such as training, doctrine, and tactics coordination. This will codify the available capabilities each CINC will have allocated to him to carry out his Strategy, and the Policy end state assigned to him by the National Command Authority (NCA). Currently the Army’s watercraft infrastructure is a recognized combat multiplier, as such it is a protected resource. Further cuts in the Army’s overall force puts

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<sup>13</sup> Joint Army & Navy MOA, Subj: Development of JLOTS Systems, Aug 1996

this future force structure in jeopardy. The Army's leadership must recognize that providing the unified CINCs a series of powerful, flexible force packages that can respond to a wide variety of missions is operationally critical.

The inability to predict the status of port facilities and the environmental conditions in the contested theater of tomorrow is a given. "Given this uncertainty, watercraft units must possess the necessary capability and capacity to perform a variety of operations in any environmental condition."<sup>14</sup> The Army's FM 55-50, "Army Water Transport Operations", depicts ports of debarkation scenarios where Army watercraft will provide the needed critical support. These responsibilities include:

- a. Support to and Operation of Established Ports
- b. Logistics-Over-the-Shore (LOTS) Operations
- c. Intracoastal Operations
- d. Inland Waterway Operations
- e. Amphibious Operations

In reality the Army is responsible for developing and maintaining a coastal MSR network to support the CINC's scheme of maneuver and discharge the Navy's strategic sealift ships in any environment. The commander will continually face situations involving alternatives that will require reallocating combat power. The capability of Army watercraft expands the flexibility the CINC has when planning for a large scale scenario such as Korea or the more likely scenario such as a Humanitarian Relief operation like "Operation Restore Hope" in Somalia in 1992. These are just two examples that point to Army watercraft's increased relevance in the future.

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<sup>14</sup> Department of the Army, *Army Watercraft Master Plan*, Nov 96 (p2-7).

## CONCLUSION

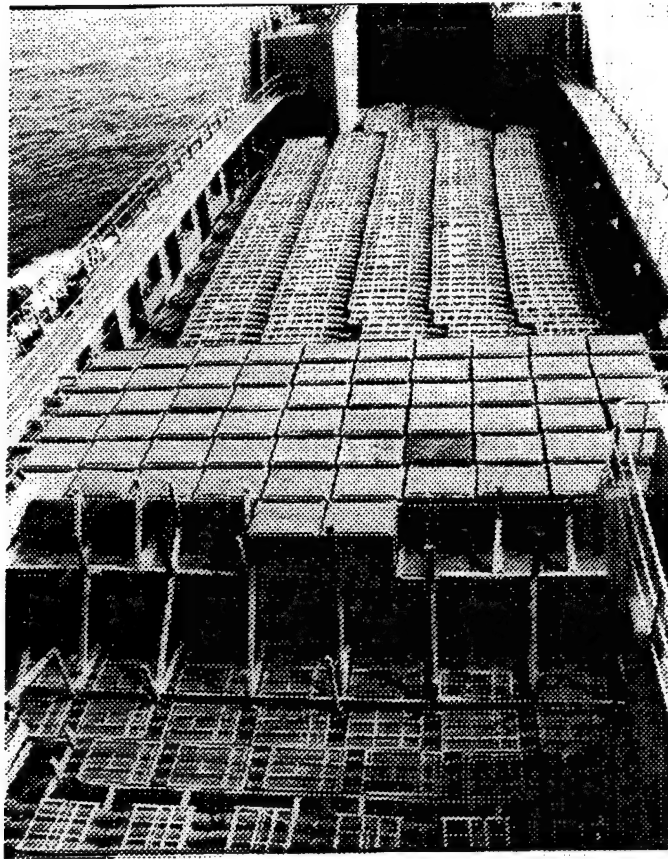


FIGURE 4 (AN LSV CARRYING 2000 TONS OR 89 C-141 EQUIVILANTS OF CLASS V)

Military history and doctrine clearly shows us that all the tools in a given theater are there to support the “ground commander”. The ability to capture and hold ground are the means Armies have in maintaining a land presence. This ability has been paramount in past conflicts, and will be in any foreseeable conflict. In today’s military we no longer have to contend with containing the monolithic threat of Soviet expansionism. Today’s reality is the next conflict for the United States will probably be a Military Operation Other Than War (MOOTW) such as “Uphold Democracy”, “Restore Hope”, or “Just Cause”. The result is a smaller, but very lethal military force that will have to project its power and influence into a theater from the continental United States. Power Projection is the

cornerstone of the future Force XXI Army. "The maneuverability provided by the sea allows a force to move from one land location to another with greater security and without dependence on local infrastructure".<sup>15</sup> The Army's Strategic Mobility Program projects, and past experience has shown that 90% of tomorrow's force will arrive in a contested/uncontested theater by Strategic Sealift. To get heavy forces into the theater quickly the Army has prepositioned a heavy brigade afloat on four LMSRs and called it Army War Reserve -3 (AWR-3). AWR-3 contains over 6500 pieces of equipment and is required to be at the port of debarkation by C+6 along with the Army's prepositioned watercraft. Army watercraft are required to discharge the equipment through fixed, partial fixed-port or over the bare beach by C+12 and have the equipment and brigade personnel in the Tactical Assembly Area (TAA) by C+15. Obviously to bring the fight to the enemy the JTF commander has to get the right equipment and personnel to the fight in any environment and sustain it. This mission falls to the Army Transportation Corps once the Strategic Sealift assets of MSC arrive in the contested theater.

The mission of the United States military is to fight and win our nations wars. Since the successful end of the "Cold War" there remains two factors that will define the future operational environment. "One is that the world contains a growing number of impoverished and unstable nation states, all in competition for wealth, power, and security. The other is that the ongoing defense drawdown reduces our capability to respond militarily to problem that will inevitably flow from this situation."<sup>16</sup> The JTF commander has to be prepared to dominate a multi-dimensional battlefield. As such he will require freedom of movement to maneuver his forces such that they give him an

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<sup>15</sup> USMC FMFRF 14-21, Draft (p14)



operational edge over his opponent. Army watercraft assets are essential in getting this force ashore and resupplying them from strategic sealift assets. They can do this when the seaport is denied, damaged or non-existent. Supporting the CINC's scheme of maneuver is paramount in any joint operation. Army watercraft give the CINC the operational flexibility to fight and win the nation's next conflict.

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<sup>16</sup> USMC Memo, *Maritime Prepositioning Force (MPF) Operational Concept* Feb 1995

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## APPENDIX I

### Table of Distribution and Allowance (TDA) Craft Listing

TDA vessels are maintained by the owning commands.

Vessel Type	1996 O/H	Location code (s)
LCU-2000	1	1
LCU-1600	1	1
LCM-8 MOD 1	26	1,2,3,4,5,6,11
100' TUG	3	1,7
45' TUG	1	4
J, T, & Q BOATS	5	1,3,8
60-TON FLOATING CRANE	1	4
89-TON FLOATING CRANE	3	1,4,10
FUEL BARGE (BG 231C)	2	1
CARGO/LIQUID BARGE (BK 218)	5	4,8
CARGO BARGES (BC 231A & BC 7005)	8	4,6,7,9
BARGE ASSEMBLY (M456)	3	10
PATROL BOAT, HIGH SPEED	10	1,2
HIGH SPEED/PASSENGER FERRIES	3	1,8

**SOURCE: AWMP NO.**

#### Location Codes:

- 1- Kwajalein Islands, Marshall Island Chain, South Pacific
- 2- Aberdeen Proving Ground, MD
- 3- Japan
- 4- Rough and Ready Island, Defense Depot Region West, Stockton, CA
- 5- Puerto Rico
- 6- Terceira Island, Azores
- 7- Sunny Point, NC
- 8- USMA, West Point, NY
- 9- Pusan, Korea
- 10- Hyth Storage Depot, United Kingdom
- 11- Rock Island, IL

## APPENDIX II

### ON-HAND TOE WATERCRAFT IN THE ARMY

Lighterage Fleet Assessment—As of 1 October 1996

Category	Requirement	Quantity On-Hand
LSV	9	6
LCU-2000	47	34
LCU-1600	0	13
LCM-8		
MOD 2s	14	0
MOD 1s	37	65
CAUSEWAY FERRY	8	0
LARC-LX	12	22

*SOURCE: AWMP NOV 96*

# APPENDIX III

## PREPOSITIONED ARMY WATERCRAFT AS OF 1 OCT 96

VESSEL	AMERICAN CORMORANT (NOV 95	HYTHE,UK STORAGE DEPOT	LEASED & ABOARD LASH SHIPS	FWD STATIONED	VESSELS CURRENTLY IN PREPO
LSV	0	0	0	2	2
LCU-2000	2	1	0	0	3
LCU-1600	0	3	0	0	3
LT 100'	3	3	0	0	6
FLOATING CRANE	1	1	0	0	2
LCM-8	3	3	0	0	6
BARGE	0	4	0	0	4
FUEL PUSHER TUG	0	0	6	0	6

SOURCE: AWMP NOV 96